THAT WHICH IS CLAIMED IS:

1. A method of manufacturing a single crystal silicon carbide epitaxial layer on an off-axis silicon carbide substrate comprising:

growing a first layer of epitaxial silicon carbide on the substrate;

etching the first layer of epitaxial silicon carbide to reduce the thickness of the first layer; and

growing a second layer of epitaxial silicon carbide on the etched first layer of epitaxial silicon carbide.

2. A method according to Claim 1, further comprising interrupting the growth of the first layer of epitaxial silicon carbide prior to etching the first layer of epitaxial silicon carbide.

3. A method according to claim 2, wherein growing a first layer of epitaxial silicon carbide comprises flowing silicon and carbon containing source gases over the substrate and interrupting the growth of the first layer of epitaxial silicon carbide comprises reducing the flow of the source gases.

4. A method according to claim 2, wherein growing a first layer of epitaxial silicon carbide comprises flowing silicon and carbon containing source gases over the substrate and interrupting the growth of the first layer of epitaxial silicon carbide comprises halting the flow of the source gases.

5. A method according to claim 3, wherein etching the first layer of epitaxial silicon carbide comprises flowing an etchant gas over the substrate.

6. A method according to claim 5, wherein the etchant gas comprises H_2, Ar, HCl, Cl_2 and/or propane.

7. A method according to claim 1, wherein the first layer of epitaxial silicon carbide is doped with a dopant at a concentration of 1E18 cm^{-3} or greater.

8. A method according to claim 1, wherein the first layer of epitaxial silicon carbide has a thickness of less than 4 microns.

9. A method according to claim 1, wherein the first layer of epitaxial silicon carbide has a thickness of greater than 2 microns.

10. A method according to claim 1, wherein the first layer of epitaxial silicon carbide has a thickness of about 4 microns.

11. A method according to claim 1, wherein etching the first layer of epitaxial silicon carbide comprises etching the first layer of epitaxial silicon carbide by about 1 micron or more.

12. A method according to claim 1, wherein etching the first layer of epitaxial silicon carbide comprises etching the first layer of epitaxial silicon carbide by about 1 micron or less.

13. A method according to claim 1, wherein the second layer of epitaxial silicon carbide is grown to a thickness of about 2 microns.

14. A method according to claim 1, further comprising etching the second epitaxial layer, and growing a third epitaxial layer on the etched second epitaxial layer.

15. A method according to claim 14, further comprising interrupting the growth of the second epitaxial layer prior to etching the second epitaxial layer.

16. A method according to claim 1, wherein the substrate comprises silicon carbide having a polytype selected from the group consisting of 2H, 4H, and 6H.

17. A method according to claim 1, wherein etching the first layer of epitaxial silicon carbide comprises etching the first layer of epitaxial silicon carbide within the epitaxial growth reactor.

18. A method according to claim 1, wherein etching the first layer of epitaxial silicon carbide comprises removing the substrate from the epitaxial growth reactor and etching the first layer of epitaxial silicon carbide outside the epitaxial growth reactor.

19. A method according to claim 1, wherein the first epitaxial layer and the second epitaxial layer provide a buffer layer on the substrate.

20. A method according to claim 1, wherein growing a first layer of epitaxial silicon carbide on the substrate comprises growing a first layer of epitaxial silicon carbide on an epitaxial layer on the substrate.

21. A semiconductor structure comprising a silicon carbide epitaxial layer having a carrot defect which is terminated within the epitaxial layer.

22. A semiconductor structure comprising:

an off-axis silicon carbide substrate;

an epitaxial layer of silicon carbide on the substrate,

a carrot defect having a nucleation point in the vicinity of an interface between the substrate and the epitaxial layer, wherein the carrot defect terminates within the epitaxial layer.

23. A structure according to claim 22, wherein the substrate comprises silicon carbide having a polytype selected from the group consisting of 2H, 4H, and 6H.

24. A structure according to claim 22, wherein the silicon carbide substrate is cut off-axis towards the $\langle 11\bar{2}0 \rangle$ direction.

25. A structure according to claim 22, wherein the silicon carbide substrate is cut off-axis towards a crystallographic direction perpendicular to the c-axis.

26. A structure according to claim 22, wherein the epitaxial layer comprises a buffer layer.

27. A structure according to claim 22, wherein the epitaxial layer is doped with a dopant at a concentration of 1E18 cm^{-3} or greater.

28. A structure according to claim 27, wherein the dopant comprises nitrogen, phosphorus, boron or aluminum.